

AMENDMENTS TO THE CLAIMS

Please cancel claims 2, 6, and 21.

Please amend claims 1, 4, 5, 8, 9, 10, 11, 14, 18, 22, 23, and 24.

Please add claim 26.

Please replace the claims with the following listing of the claims.

Listing of the Claims:

The listing of claims will replace all prior versions and listings of claims in the Application:

1. (Currently Amended) A hand-held device for monitoring a patient's blood pressure, comprising:

a removable, hand-held component configured to be held proximal to the patient's skin;

an optical module operating in a reflective mode and mounted on the hand-held component, the optical module comprising an optical source component configured to generate optical radiation and a first optical sensor configured to generates detect reflected radiation from the patient and, in response, generate a first set of information when the hand-held component is held proximal to the patient's skin;

an electrical sensor mounted on the hand-held component and comprising an electrode pair configured to generate a second set of information when the hand-held component is held proximal to the patient's skin; and

a processing module, mounted in the hand-held component, and configured to receive the first and second sets of information and, the processing module comprising a processor that calculates a time difference between components of the first set of

information and the second set of information and compares the time difference to a mathematical model to calculate a blood pressure value.

2. (Cancelled)

3. (Previously Cancelled)

4. (Currently Amended) The device of claim [[2]] 1, wherein the electrical sensor is configured to generate a time-dependent electrical waveform in response to the body-generated electrical signal.

5. (Currently Amended) The device of claim [[2]] 1, wherein the ~~processing module hand-held component~~ further comprises an analog-to-digital converter connected to the processing module.

6. (Cancelled)

7. (Previously Amended) The device of claim 1, wherein the optical source component of the optical module further comprises a first optical source that generates visible radiation, and a second optical source that generates infrared radiation.

8. (Currently Amended) The device of claim [[1]] 7, wherein the optical sensor is a photodiode.

9. (Previously Amended) The device of claim 8, wherein the photodiode is configured to generate a photocurrent after detecting radiation generated by the first optical source and the second optical source.

10. (Currently Amended) The device of claim 9, wherein the ~~processing module~~ hand-held component further comprises an analog-to-digital converter connected to the processing module and configured to receive and process the photocurrent.

11. (Currently Amended) The device of claim 9, wherein the processing module further comprises firmware that processes the photocurrent to generate a time-dependent optical waveform.

12 - 13. (Previously Canceled)

14. (Previously Amended) The device of claim 1, wherein the processor further comprises computer-readable firmware that processes the first set of information to additionally determine pulse oximetry and heart rate.

15 - 17. (Previously Canceled)

18. (Currently Amended) The device of claim 1, wherein the hand-held component further ~~comprising~~ comprises a serial interface.

19. (Original) The device of claim 18, wherein the serial interface is configured to send information to an external device.

20. (Original) The device of claim 18, wherein the serial interface is configured to accept calibration information.

21. (Canceled)

22. (Currently Amended) A hand-held device for monitoring a patient's blood pressure, comprising:

a removable, hand-held component configured to be positioned proximal to the patient's skin;

a pressure-delivering component configured to apply a pressure to the patient's skin;

an optical module mounted on the hand-held component comprising an optical source component and a first optical sensor configured to generate a first set of information while the pressure is applied to the patient's skin and radiation emitted from the optical source is reflected from the patient's skin and detected by the first optical sensor;

an electrical sensor mounted on the hand-held component and comprising an electrode pair configured to generate a second set of information; and

a processing module, mounted in the hand-held component, and configured to receive the first and second sets of information and comprising a processor that calculates a time difference between components of the first set of information and the second set of information and compares the time difference to a mathematical model to calculate a blood pressure value.

23. (Currently Amended) A method for measuring a blood pressure value from a patient, comprising the steps of:

1) holding a removable, hand-held component proximal to the patient's skin, the removable, hand-held component comprising: i) an optical component comprising an optical source component configured to emit optical radiation and a first optical sensor

configured to detect reflected radiation and, in response, generate a first set of information while the hand-held component is held proximal to the patient's skin; ii) an electrical component comprising an electrode pair configured to generate a second set of information while the hand-held component is held proximal to the patient's skin; and iii) a processor, comprised by the removable hand-held component, and operating an algorithm that processes both the first set of information and the second set of information;

2) initiating a measurement wherein the optical component generates the first set of information, and the electrical component generates the second set of information; and

3) processing the first set of information and the second set of information with the processor by calculating a time difference between components of the first set of information and the second set of information and comparing the time difference to a mathematical model to calculate a blood pressure value.

24. (Currently Amended) A method for analyzing a blood pressure value from a patient, comprising the steps of:

1) holding a removable, hand-held component proximal to the patient's skin, the removable, hand-held component comprising: i) an optical component comprising an optical source component configured to emit optical radiation and a first optical sensor configured to detect reflected radiation and, in response, generate a first set of information while the hand-held component is held proximal to the patient's skin; ii) an electrical component comprising an electrode pair configured to generate a second set of information while the hand-held component is held proximal to the patient's skin; and iii)

a processor, comprised by the removable hand-held component, and operating an algorithm that processes the first set of information and the second set of information;

2) initiating a measurement wherein the optical component generates the first set of information, and the electrical component generates the second set of information;

3) processing the first set of information and the second set of information with the processor by calculating a time difference between components of the first set of information and the second set of information and comparing the time difference to a mathematical model to calculate a blood pressure value; and

4) wirelessly transmitting the blood pressure value to an external receiver.

25. (Previously Presented) The method of claim 24, further comprising the step of transmitting the blood pressure value to an Internet-accessible computer system.

26. (New Claim) The method of claim 24, further comprising the step of transmitting the blood pressure value to a central computer system.